Author Index to Volume 37

References with (A) are abstracts of papers presented at meetings of the Optical Society of America; (T) designates title only; (L) designates Letters to the Editor.

Adams, Elliot Q. Table of logarithmic corrections to the Wein radiation law—695

—— (see Barnes, B. T.)—804, 808

Adel, Arthur. Absorption line-width in the rotation spectrum of atmospheric water vapor—516(A)

—— Estimate of transparency of the atmospheric window 16 mu to 24 mu—769

Alexander, Collin H. Electron bombardment cleaning—521(A)

Atanasoff, John V. and C. E. Barthel, Jr. New approach to the problem of granularity in photographic materials—524(A)

Bäckström, Helmer and Johan Basberg. Red and infrared filters for the study of the Herschel effect—891

Baird, W. S., H. M. O'Bryan, George Ogden, and Dorothy Lee. Automatic recording infra-red spectrophotometer—754

Balcom, Margaret M. (see Gibson, Kasson S.)—593

Ballard, S. S., E. O. Hulburt, J. A. Sanderson, and H. S. Stewart. Radiometry and spectroscopy at operation crossroads—522(A)

Banning, Mary. Neutral density filters of Chromel A—686

—— Partially reflecting mirrors of high efficiency and durability—688

—— Practical methods of making and using multilayer filters—792

Barnes, B. T., W. E. Forsythe, and E. Q. Adams. Power losses from heated objects in still air—808

——, **W. E. Forsythe, and E. Q. Adams.** Total emissivity of various materials at 100–500°C—804

Barr, E. E. (see Billings, Bruce H.)—123

Barthel, C. E., Jr. (see Atanasoff, John V.)—524(A)

Basberg, Johan (see Bäckström, Helmer)—891

Baum, W. A. (see Tousey, R.)—523(A)

Beams, J. W., A. R. Kuhlthau, A. C. Lapsley, J. H. McQueen, L. B. Snoddy, and W. D. Whitehead, Jr. Spark light source of short duration—868

Bechtold, M. F. Coating thickness measurements by interferometry—873

Beloian, E. (see Jacobsohn, S.)—941

Benford, James R. Improvements in microscope illumination—523(A), 642

Bennett, Harold F. Concentric Maksutov-Schmidt reflecting systems—520(A)

Benson, Nels, C. (see Goldberg, Benjamin)—186

Billings, Bruce H. Tunable narrow band optical filters—521(A), 738

—— (see Hyman, Mark Jr.)—113

——, **W. L. Hyde, and E. E. Barr.** Investigation of the properties of evaporated metal bolometers—123

—— **and Mark Hyman, Jr.** Infra-red refractive index and dispersion of evaporated stibnite films—119

—— **and Mark Hyman, Jr.** Erratum: Infra-red refractive index and dispersion of evaporated stibnite films—395

Bingham, Ronald H. and Herman Hoerlin. Optimum spectral sensitivities for a reversible color film process—199

Boeder, Paul. Book review—938

Boettner, E. A. and C. F. Tufts. Study concerning characteristics of the high voltage a.c. arc—192

Bouman, M. A. and H. A. van der Velden. Two-quanta explanation of the dependence of the threshold values and visual acuity on the visual angle and the time of observation—908

Bouwers, A. Monographs on the progress of research in Holland; achievements in optics—732

Brice, Arthur T. and Paul H. Keck. Most favorable absorption of the phase plate in phase contrast microscopy—647

Bridgman, C. S. (see Fry, G. A.)—635

Brockman, Frank G. Nature of the light emitter in photoflash lamps—652

Brode, Wallace R. and Robert J. Morris. Relation between the absorption spectra and the chemical constitution of dyes. Some effects of non-coplanarity on the absorption spectra of unsymmetrical disazo benzidine dyes—985(A)

Bryan, Ford R. and George A. Nahstoll. Method for microspectrography of metals—311

Burdett, R. A. and L. C. Jones, Jr. Photoelectric measurement of fluorescence spectra—522(A), 554

Butler, Keith H. Fluorescence of silicate phosphors—519(A), 566

Byler, W. H. Emission spectra of some zinc sulfide and zinc-cadmium sulfide phosphors—920

Caballero, Doris L. Theoretical development of exact solutions of reflectance of multiple layer optical coatings—176

Carpenter, R. O'B., E. Dubois, and J. Sterner. Direct-reading spectrometer for ferrous analysis—518(A), 707

Chisholm, Elizabeth B. (see Ruze, John)—988(A)

Chung Kwai Lui (see Nagy, Rudolph)—37

Clancy, Edward P. Illumination in the focal plane of a camera lens—906

Clapp, Richard H. and Robert J. Ginther. Ultraviolet phosphors and fluorescent sun tan lamps—355

Clark, David G. (see Coleman, Howard S.)—272, 671

Clark, Walter. Sensitized materials for aerial photography—983(T)

Coleman, Howard S. Reduction in image contrast caused by the aberrations in telescopic systems—684

—— Stray light caused by the presence of a luminous body within the field of an optical system—899

—— Stray light in optical instruments—526(A), 434

—— **and David G. Clark.** Production and calibration of foucault test objects of various contrasts—272

——, **David G. Clark, and Madeline F. Coleman.** Interferometer studies of telescopic systems—671

—— **and Madeline F. Coleman.** Theoretical resolution angles for point and line test objects in the presence of a luminous background—572

—— **and Samuel W. Harding.** Method for making precise resolution measurements—525(A), 263

——, **A. F. Turner, and O. A. Ullrich.** Crystal orientation and refractive index of thick evaporated MgF_2 films—521(A)

Coleman, Madeline F. (see Coleman, Howard S.)—572, 671
Coles, Donald K. Microwave absorption spectroscopy and some of its techniques—518(A)
Cooke, Frank. Optical finishing of KRS materials—984(A)
Coulliette, J. H. Spectrographic analysis of ferrosilicon—518(A), 609
Counter, Virgil A. (see Ruze, John)—988(A)
Craggs, J. D. (see Hopwood, W.)—560
Crawford, F. W. (see Nielsen, J. Rud)—296
Cross, Paul C. and Eugene R. Nixon. Criterion for resolution—309(L)
Crowe, M. O'L. and A. Walker. Fluorescence and absorption spectral data for pigment synthesized by the human tubercle vacillus and isolated by chromatographic analysis—986(A)

Dennison, D. M. (see Hadley, L. N.)—451
DeVore, J. R. Calibration of a photo-multiplier photometer—994(A)
—— **and H. A. Iams.** Microwave optics between parallel conducting sheets—987(T)
—— **and A. H. Pfund.** Optical scattering by dielectric powders of uniform particle size—826
Dieke, G. H. (see Loh, H. Y.)—837
Dobriner, Konrad (see Jones, Norman)—516(A)
Douglas, A. E. and D. H. Rank. Measurement of depolarization factors in Raman spectra—985(A)
Douglas, Florence Lesch (see Haupt, Geraldine Walker)—698
Dreyer, John F. Variable light polarizing coating—983(A)
Dubois, E. (see Carpenter, R. O'B.)—518(A), 707
Duntley, Seibert Q. Measurement of meteorological range—994(A)
—— **and W. R. Jacobson.** Goniophotometric characteristics of typical diffuse reflectors—528(A)

Ellerbrock, V. J. (see Fry, G. A.)—635
Ellis, Wade (see Spenser, Roy C.)—988(A)
Ellis, Wade, Norris O. Hansen, George E. Reynolds, and Edward J. Murphy. On metal plate prisms for microwaves. I.—988(A)
Engstrom, Ralph W. Multiplier photo-tube characteristics: application to low light levels—420.
Enns, J. H. and R. A. Wolfe. Instantaneous spectrum line intensity variations—519(A)

Fast, E. and J. Rud Nielsen. Effect of alkali and alkaline earth salts on the spectrographic determination of strontium—518(A), 614
Fastie, W. G. and A. H. Pfund. Selective infra-red gas analyzers—762
Fischer, A. W. (see Martin, E. J.)—923
Fine, Ellen C. (see Spenser, Roy C.)—988(A)
Foote, P. C. (see Townsley, M. G.)—42
Forrest, Jack W., Norbert J. Kreidl, and Tyler G. Pitt. Color variations in glasses containing iron—986(A)
Forsythe, W. E. (see Barnes, B. T.)—804, 808
Foss, Carl E. Tetrahedral representation of the color solid—529(A)
Foster, L. V. and E. M. Thiel. Achromatic ultraviolet microscope objective—992(A)
Frank, J. M., W. S. Huxford, and W. R. Wilson. Modulation of the resonance lines in a cesium arc—718
Fred, Mark, Norman H. Nachtrieb, and Frank S. Tomkins. Spectrochemical analysis by the copper spark method—279
Friedel, R. A. (see McGovern, J. J.)—660
Friedman, Harry S. Method of computing correction plate for Schmidt system for near projection, with special reference to system for television projection—520(A), 480
Froelich, Herman C. Note on the stability of phosphors under ultraviolet irradiation—308(L)
Fry, D. L. (see Rassweiler, G. M.)—963
Fry, Glenn A. Relation of the configuration of a brightness contrast border to its visibility—166
——, **C. S. Bridgman, and V. J. Ellerbrock.** Effect of atmospheric scattering upon the appearance of a dark object against a sky background—635
Fulcher, Gordon S. Telescope objective without spherical aberration for large apertures, consisting of four crown glass lenses—47

Galochkina, L. P. (see Kravkov, S. V.)—181
Gardner, Irvine C. Compensation of aperture ratio markings of a photographic lens for absorption, reflection, and vignetting losses—524(A)
—— **and Francis E. Washer.** Lenses of extremely wide angle for airplane mapping—984(A)
Gibson, Kasson S. and Margaret M. Balcom. Transmission measurements with the Beckman quartz spectrophotometer—593
Ginther, Robert J. (see Clapp, Richard H.)—355
Glancy, A. E. Erratum: On the theory and computation of an aspherical surface—663
Godlove, I. H. Limiting colors due to ideal absorption and transmission bands—528(A), 778
Goldberg, Benjamin. Electroformed precision prisms—992(A)
—— **and Nels C. Benson.** Apparatus for determining spherical aberration of convex surface of paraboloid of revolution—186
Gore, Robert C., Robert S. McDonald, Van Zandt Williams, and John U. White. Comparison of LiF and CaF_2 prisms for infra-red use—23
Graham, C. H. (see Riggs, L. A.)—526(A), 415
Green, Milton. Some observations in photographic photometry on emulsion calibration curves—993(A)
Greene, Bernard F. Infra-red response from incandescent lamps—525(A)
Griffin, Donald R. (see Wald, George)—321
——, **Ruth Hubbard, and George Wald.** Sensitivity of the human eye to infra-red radiation—546
Grove, Josephine (see Helson, Harry)—387
—— **and Harry Helson.** Change in object colors by passing from daylight (illuminant C) to incandescent-lamp light (illuminant A)—529(A)
Gunter, Roy C., Jr. Stabilized aerial camera mountings—984(A)

Hadley, L. N. and D. M. Dennison. Reflection and transmission interference filters—451

Hamley, D. H. and Charles Sheard. Factors in fluorescence microscopy—523(A), 316
Hampton, Robert R. (see Tingey, Harold C.)—984(A)
Hanau, Richard and R. A. Wolfe. Investigation of the use of Geiger-Müller photo-electron counters in the spectrographic analysis of phosphorus in steel—989(A)
Hansen, Norris O. (see Ellis, Wade)—988(A)
Harding, Samuel W. (see Coleman, Howard S.)—525(A), 263
Harris, Franklin S., Jr. Some new optical diffraction pictures—982(A)
Harrison, George R. (see McNally, J. Rand, Jr.)—93
Hartmann, W. and B. E. Prescott. Quantitative spectrochemical determination of barium, strontium, and calcium—989(A)
Harvey, C. E. (see Hasler, M. F.)—990(A)
Hasler, M. F., J. W. Kemp, and C. E. Harvey. New applications of the quantometer to direct-reading spectrochemistry—990(A)
——, **J. W. Kemp, and W. H. Miller.** High precision source unit for spectrochemistry—990(A)
Haupt, Geraldine Walker and Florence Lesch Douglas. Chromaticities of lovibond glasses—698
Hecht, Selig. Visual thresholds of steady point sources of light in fields of brightness from dark to daylight—59(L)
—— (see Lamar, Edward S.)—531
——, **Sherman Ross, and Conrad G. Mueller.** Visibility of lines and squares at high brightnesses—500
Heggen, George E. (see Strock, Lester W.)—29
Helson, Harry (see Grove, Josephine)—529(A)
—— **and Josephine Grove.** Changes in hue, lightness, and saturation of surface colors in passing from daylight to incandescent-lamp light—387
Hendley, Charles D. (see Lamar, Edward S.)—531
Herman, Robert and Shirleigh Silverman. The decoloration of natural fluorite crystals—871
—— **and Shirleigh Silverman.** Cinema spectrograph for photographing rapid spectral sequences—988(A)
Herriott, W. Photoelectric lens bench—472
Herscher, L. W. (see Wright, N.)—211, 516(A)
Herzberger, M. Light distribution in the optical image—485
—— Contributions of the single surfaces to the image errors—990(A)
—— Book review—732
Hess, H. (see Jacobsohn, S.)—941
Hettinger, Edwin L. Spectral transmissions of some eye protective glasses—526(A)
Higgins, George C. (see Jones, Loyd A.)—217
Hill, A. G. Some applications of microwaves to problems of physics—987(T)
Hoerlin, Herman (see Bingham, Ronald H.)—199
Hopkins, Robert E. and Walter Siegmund. Aspheric corrector plate for a refracting optical system—991(A)
Hopwood, W. and J. D. Craggs. Spectral variations of the intermittency effect for some panchromatic plates—560
Hsien-Yü Hsü, M. Richartz, and Yüng-K'ang Liang. Generalized intensity formula for a system of retardation plates—99
Hubbard, J. C., I. F. Zartman, and C. R. Larkin. Optical study of acoustic fields near diffracting edges—832
Hubbard, Ruth (see Griffin, Donald R.)—546
Hulburt, E. O. Upper atmosphere of the earth—523(A), 405
—— (see Ballard, S. S.)—522(A)
—— (see Tousey, R.)—78
Hull, G. F., Jr. Microwave and optical analogues—987(T)
Hulst, H. C. van de. Theory of the anti-coronae—16
Humphreys, Curtis J. (see Plyler, Earle K.)—517(A)
—— **and Earle K. Plyler.** Infra-red spectra of krypton and argon—516(A)
Hunter, Richard S. Book review—309
—— Apparatus for measuring factors connected with appearance—986(A)
—— Reflex glossmeter—528(A)
Huxford, W. S. (see Frank, J. M.)—718
—— **and J. R. Platt.** Spectral and modulation characteristics of the concentrated-arc—10
Hyde, W. Lewis. Index of refraction of silver chloride in the heat region—984(A)
—— (see Billings, Bruce H.)—123
Hyman, Mark Jr. (see Billings, Bruce H.)—119, 395
—— **and Bruce H. Billings.** High transmission windows for radiation of 3 to 14 microns wave-length—113

Iams, H. A. (see De Vore, J. R.)—987(A)
Ingalls, A. L. and K. Pestrecov. Centering of optical systems—991(A)
Ivanoff, A. On the influence of accomodation on spherical aberration in the human eye, an attempt to interpret night myopia—730(L)
Ives, Herbert E. Historical note on the rate of a moving atomic clock—810

Jacobs, Donald H. and Seymour Scholnick. Absorption-emission pyrometer: A new type of instrument of high flame temperatures—992(A)
Jacobsen, A. E. Non-adaptability of the I.C.I. system to some nearwhites which show absorption in the far blue region of the spectrum—987(A)
Jacobsohn, S., E. Beloian, and H. Hess. Rapid non-destructive method of determining the refractive index of lens components, using a spectrometer—941
Jacobson, W. R. (see Duntley, Seibert Q.)—528(A)
Jaycox, Edwin K. Spectrochemical analysis of ceramics and other non-metallic materials—162
—— Spectrochemical analysis of nickel alloys—159
Johnson, F. S. and R. Tousey. Reduction of astigmatism in the NRL rocket spectrograph—991(A)
—— (see Tousey, R.)—523(A)
Jones, Loyd A. and George C. Higgins. III. Some characteristics of the visual system of importance in the evaluation of graininess and granularity—217
Jones, L. C., Jr. (see Burdett, R. A.)—522(A), 554
Jones, Norman, M. J. Whalen, V. Z. Williams, and Konrad Dobriner. The infra-red absorption of carbonyl groups in steroids—516(A)
Jones, R. Clark. A new calculus for the treatment of optical systems. V. More general formulation, and description of another calculus—107
—— New calculus for the treatment of optical systems. VI. Experimental determination of the matrix—110
—— Ultimate sensitivity of radiation detectors—879

Kaprelian, Edward K. Recent and unusual German lens designs—524(A), 466

Katz, Amrom. Aerial photographic equipment and applications—983(T)
Keck, Paul H. (see Brice, Arthur T.)—647
Kemp, J. W. (see Hasler, M. F.)—990(A)
Kennedy, William R. Teaching routine spectrographic analysis in industry—989(A)
—— Spectrochemical analysis of high copper in cast iron and steel—154
Kent, Rockwell. III. Scattered light in microphotometer systems—519(A)
Kessler, K. G. and R. A. Wolfe. Measurement of the intensity ratios of spectral lines with electron multiplier photo-tubes—133
Kiess, C. C. and George Shortley. Zeeman effect and g-values for neutral nitrogen and oxygen—989(A)
King, Peter (see Lockhart, Luther B. Jr.)—689
Kingslake, R. Book review—58
—— Recent developments in lenses for aerial photography—1
Knoll, H. A. (see Koomen, M. J.)—527(A)
Kock, Winston E. Metal plate lenses for microwaves—987(T)
Koomen, M. J., H. A. Knoll, and R. Tousey. Infra-red pupillometer—527(A)
——, **R. Scolnik, and R. Tousey.** Measurements of the spherical aberration of the human eye—992(A)
Kravkov, S. V. and L. P. Galochkina. Effect of a constant current on vision—181
Kreidl, Norbert J. (see Forrest, Jack W.)—986(A)
Kremers, H. C. Optical silver chloride—337
Kuhlthau, A. R. (see Beams, J. W.)—868
Kvalheim, Aslak. Spectrochemical determination of the major constituents of minerals and rocks—585

Lamar, Edward S., Selig Hecht, Simon Shlaer, and Charles D. Hendley. Size, shape, and contrast in detection of targets by daylight vision. I. Data and analytical description—531
Land, Edwin, H. New one-step photographic process—61
Lapsley, A. C. (see Beams, J. W.)—868
Larkin, C. R. (see Hubbard, J. C.)—832
Lash, J. F. (see Rassweiler, G. M.)—963
Lauer, James L. and P. H. Miller, Jr. Instrument for the measurement of the index of refraction of liquids in the wave-length—664
Law, R. R. and I. G. Maloff. Projection screens for home television receivers—993(A)
Lee, Dorothy (see Baird, W. S.)—754
Leurgans, P. J. Exact solution of the interference filter as a boundary value problem—521(A)
—— **and A. F. Turner.** Frustrated total reflection interference filters—983(A)
Leverenz, H. W. General correlations between the efficiency characteristics and constitutions of phosphors—520(A)
—— (see Shrader, R. E.)—939(L)
Levinstein, Henry and Robley C. Williams. Structure of evaporated films as determined by electron diffraction and electron microscopy—520(A)
Liang, Yung-K'ang (see Hsu, Hsien-Yu)—99
Lighty, Paul E. (see Neuhaus, C. J.)—519(A)
Liston, Max D. A modulated infra-red recording system—515(A)
—— (see Rassweiler, G. M.)—963
Lockhart, Luther B. Jr. and Peter King. Three-layered reflection-reducing coatings—689
Loh, H. Y. and G. H. Dieke. Fluctuations in gas discharges—837
Loofbourow, John R. Book review—670
Lui, Chung Kwai (see Nagy, Rudolph)—37

MacAdam, D. L. Book review—731
—— Note on the number of distinct chromaticities—308(L)
MacDonald, Duncan E. Methods of evaluating resolution of aerial cameras—984(A)
McCartney, J. S. and D. H. Rank. Spectral characteristics of Hg arc. Radiation with regard to production of Brillouin spectra and "second-order Raman spectra"—985(A)
McClellan, D. F. (see Miley, H. A.)—994(A)
McDonald, Robert S. (see Gore, Robert C.)—23
McGovern, J. J. and R. A. Friedel. Infra-red filters and cells of unpolished salt crystals—660
McNally, J. Rand Jr., George R. Harrison, and Eugene Rowe. Hollow cathode source applicable to spectrographic analysis for the halogens and gases—93
McQueen, J. H. (see Beams, J. W.)—868
Macht, David I. and Marcus Ostro. Pharmacological reactions of irradiated and non-irradiated blood sera—986(A)
Mahan, A. I. Focal plane diffraction anomalies in telescopic systems—852
Magliozzi, Joseph. Contrast effects of phase changing elements in microscopy—982(A)
Mahoney, Marie M. (see Smith, Daniel)—986(A)
Maloff, I. G. (see Law, R. R.)—993(A)
Mandel, B. (see Martin, E. J.)—923
Maréchal, A. Mechanical integrator for studying the distribution of light in the optical image—403(L)
——. Study of diffraction patterns in presence of various aberrations—982(A)
Marron, T. U. and J. H. Muth. A movable unitized Beckman spectrophotometer installation—522(A)
Martin, E. J., A. W. Fischer, B. Mandel, and R. E. Nusbaum. Infra-red spectrophotometer for industrial research—923
Meggers, William F. Second spectrum of ytterbium—988(A)
Meister, George and Rudolph Nagy. Notes on the stability of phosphors under ultraviolet irradiation—403(L)
Miley, H. A. and D. F. McClellan. Sky brightness measurements from rocket-borne equipment—994(A)
Miller, P. H., Jr. (see Lauer, James L.)—664
Miller, W. H. (see Hasler, M. F.)—990(A)
Milne, Gorden G. (see O'Brien, Brian)—993(A)
Moffitt, G. W. Compensation of flexure in range finders and sighting instruments—582
Morris, Robert H. Metameric formulation—669(L)
—— (see Brode, Wallace R.)—985(A)
Mote, F. A. (see Riggs, L. A.)—526(A), 415
Mueller, Conrad G. (see Hecht, Selig)—500
—— (see Riggs, L. A.)—526(A), 415
Murphy, Edward J. (see Ellis, Wade)—988(A)
Muth, J. H. (see Marron, T. U.)—522(A)

Nachtrieb, Norman H. (see Fred, Mark)—279
Nagy, Rudolph (see Meister, George)—403(L)
—— **and Chung Kwai Lui.** Thermal and x-ray analyses of some common phosphors—37
Nahstoll, George A. Industrial application of Geiger-Müller counters to the analysis of phosphorus in steel—990(A)
—— (see Bryan, Ford R.)—311
Nelson, R. C. Spectrograph of high resolution for the region 0.6 to 3.0 microns—985(A)
Neuhaus, C. J. and Paul E. Lighty. A point-to-plane arcing technique for the spectrochemical analysis of monel—519(A)
Nickerson, Dorothy. Illuminant in textile color matching, an illuminant to satisfy preferred conditions of daylight-match—987(A)
Nielsen, J. Rud. Theory of condensing lenses for raman tubes of small volume—517(A), 494
—— (see Fast, E.)—518(A), 614
——, **F. W. Crawford, and D. C. Smith.** An infra-red prism spectrometer of high resolving power—296
—— **and Charles M. Richards.** Intensity distribution in the raman bands of six hydrocarbons—517(A)
Nixon, Eugene R. (see Cross, Paul C.)—309(L)
Nolan, Philip (see Van den Akker)—363
Nottingham, Wayne B. Book review—731
Nusbaum, R. E. (see Martin, E. J.)—923

Oberly, J. J. (see Tousey, R.)—523(A)
O'Brien, Brian. Stiles and Crawford effect in polarized light—527(A), 275
—— **and Gordon G. Milne.** Application of an image dissection principle to high speed motion photography—993(A)
O'Bryan, H. M. Infra-red recording spectrophotometer—516(A)
—— (see Baird, W. S.)—754
Ogden, George (see Baird, W. S.)—754
Osterberg, Harold. Polanret microscope—726
—— Theory of measuring unresolvable particles with the phase microscope—523(A)
Ostro, Marcus (see Macht, David I.)—986(A)

Packer, D. M. Instrument for evaluation of abrasion-resistance of thin films—983(A)
Pearson, Maynard D. (see Spencer, Roy C.)—988(A)
Perkins, Willard T. Submarine binocular telescope MK 90 and MK 91—524(A)
Pestrecov, K. (see Ingalls, A. L.)—991(A)
Pett, Tyler G. (see Forrest, Jack W.)—986(A)
Pfund, A. H. Improved infra-red polarizer—558
—— (see DeVore, J. R.)—826
—— (see Fastie, W. G.)—762
Pidduck, F. B. Talbot's bands—55
Platt, John R. On the Wright-Nelson explanation of the Stiles-Crawford effect—669(L)
—— (see Huxford, W. S.)—10
Plyler, Earle K. Infra-red radiation from a Bunsen burner—984(A)
—— Infra-red spectrometry from 15 to 25μ—746
—— (see Humphreys, Curtis J.)—516(A)
—— **and Curtis J. Humphreys.** The infra-red absorptions spectrum of carbon disulphide—517(A)
Plymale, W. S. Jr. Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials—399
Prescott, B. E. (see Hartmann, W.)—989(A)

Rank, D. H. Polarization and intensity measurement in Raman spectra by the photoelectric method—798
—— (see Douglas, A. E.)—985(A)
—— (see McCartney, J. S.)—985(A)
——, **J. S. McCartney, and C. J. Szasz.** Polarization of Brillouin spectra—985(A)
Rassweiler, Gerald M., Max D. Liston, J. F. Lash, and D. L. Fry. Recording and control system for infra-red spectrophotometer—963
Reilly, Frank J. Light and shadow and its representation—528(A)
Reynolds, George E. (see Ellis, Wade)—988(A)
Richards, Charles M. (see Nielsen, J. Rud.)—517(A)
Richartz, M. (see Hsien-Yu Hsu)—99
Riggs, A., G. Mueller, H. Graham, and A. Mote. Photographic measurements of atmospheric "boil"—526(A), 415
Roach, F. E. and T. J. Rollins. Self-reversal of spectral lines in Al-Mg alloys—989(A)
Rollins, T. J. (see Roach, F. E.)—989(A)
Rosen, Joseph S. Refractive indices of alcohol, water, and their mixtures at high pressures—932
Ross, Sherman (see Hecht, Selig)—500
Rowe, Eugene (see McNally, J. Rand, Jr.)—93
Ruze, John, Virgil A. Counter, Elizabeth B. Chisholm. Design of a wide-angle microwave line source (metal lens)—988(A)

Sanderson, J. A. The diffuse spectral reflectance of paints in the near infra-red—771
—— (see Ballard, S. S.)—522(A)
Scharf, P. T. Some new techniques in prism refractometry—992(A)
Scholnick, Seymour (see Jacobs, Donald H.)—992(A)
Schulz, L. G. Making fresnel off-axis parabolic mirrors by the evaporation technique—349
—— Preparation by an evaporation technique of correcting elements for refracting optical systems—509(L)
Schwartz, Myra (see Urbach, Franz)—122(L)
Scolnik, R. (see Koomen, M.)—992(A)
Sheard, Charles (see Hamley, D. H.)—523(A), 316
Shive, John N. Investigation of the figure of small concave metal-replica mirrors—849
Shlaer, Simon (see Lamar, Edward S.)—531
Shortley, George (see Kiess, C. C.)—989(A)
Shrader, R. E. and H. W. Leverenz. Cathodoluminescence emission spectra of zinc-oxide phosphors—939(L)
Siegmund, Walter (see Hopkins, Robert E.)—991(A)
Silberstein, Ludwik. Notes on W. S. Stiles' paper entitled "A modified Helmholtz line-element in brightness-colour space"—292
Silverman, Shirleigh (see Herman, Robert)—988(A), 871
Sinclair, David. Light scattering by spherical particles—475
Sinden, R. H. Silberstein on intrinsic properties of the color domain—396

Sloan, Louis L. and Lorraine Wollach. Case of unilateral deuteranopia—527(A)
Smith, D. and Marie M. Mahoney. Preparation and application of reproducible gloss standards—986(A)
Smith, D. C. (see Nielsen, J. Rud)—296
Snoddy, L. B. (see Beams, J. W.)—868
Sommer, A. Photoelectric cells—731
Spencer, Roy C., Wade Ellis, Ellen C. Fine, and Maynard D. Pearson. Reflectors for wide-angle scanning at microwave frequencies—988(A)
Stark, Stephen W. Computation of paraxial coefficients of an optical system—990(A)
Stein, Anna. Certain class of binocularly equivalent configurations—944
Sterner, J. (see Carpenter, R. O'B.)—518(A), 707
Stewart, H. S. (see Ballard, S. S.)—522(A)
Straat, Harold W. Stray radiation in littrow-type spectrometers which employ collimating mirrors—507(L)
Strain, C. V. (see Tousey, R.)—523(A)
Strock, Lester W. and George E. Heggen. Use of incompletely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analysis—29
Studer, Frank J. Method for automatically recording spectral energy distribution from continuous spectrum sources—522(A)
—— Method for measuring the spectral energy distribution of low brightness light sources—288
Sweet, M. H. Logarithmic photo-multiplier tube photometer—432
Szasz, C. J. (see Rank, D. H.)—985(A)

Täcklind, S. (see Vogl, J.)—975
Thiel, E. M. (see Foster, L. V.)—992(A)
Tingey, Harold C. and Robert R. Hampton. Punched card bibliography and data index of infra-red spectroscopy—984(A)
Todd, J. Edward (see Van den Akker)—363
Tomkins, Frank S. (see Fred, Mark)—279
Tousey, R. (see Johnson, F. S.)—991(A)
—— (see Koomen, M. J.)—527(A), 992(A)
—— **and E. O. Hulburt.** Brightness and polarization of the daylight sky at various altitudes above sea level—78
——, **C. V. Strain, J. J. Oberly, F. S. Johnson, and W. A. Baum.** Solar spectrograph for a V-2 rocket—523(A)
Townsley, M. G. and P. C. Foote. Autocollimator for precise measurement of the flange focal distance of photographic lenses—42
Tuckerman, L. B. On the intensity of the light reflected from or transmitted through a pile of plates—818
Tufts, C. F. (see Boettner, E. A.)—192
Turner, A. F. Interference-type heat reflecting filter—982(A)
—— (see Coleman, Howard S.)—521(A)
—— (see Leurgans, P. J.)—983(A)

Ullrich, O. A. (see Coleman, Howard S.)—521(A)
Urbach, Annie (see Urbach, Franz)—122(L)
Urbach, Franz, Annie Urbach, and Myra Schwartz. Brightness of apparent fluorescence as a function of the exciting intensities—122(L)
Van den Akker, J. A., J. Edward Todd, Philip Nolan, and Willmer A. Wink. Use of a monochromatic colorimeter for the study of color blindness—363
Van der Velden, H. A. (see Bouman, M. A.)—908
VanLear, George A. The hololumen system for rating photo-responsive devices—525(A)
Vašiček, Antonin. Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass—145
—— Reflection of light from glass with double and multiple films—623
—— Tables for the determination of the refractive index and of the thickness of the thin film by the polarimetric method—979(L)
Vogl, J. and S. Täcklind. New type of reflecting sight—975
Volosov, D. S. Differential method for introducing non-spherical surfaces into calculation of optical systems—342

Wald, George (see Griffin, Donald R.)—546
—— **and Donald R. Griffin.** Change in refractive power of the human eye in dim and bright light—321
Walker, A. (see M. O'L. Crowe)—986(A)
Washer, Francis E. (see Gardner, Irvine C.)—984(A)
Weinstein, W. Reflectivity and transmissivity of multiple thin coatings—576
Werner, A. J. Correcting filters for photoelectric photometry and colorimetry—528(A)
Weyl, W. A. Light absorption and emission of ions in glasses and crystals as affected by asymmetrical electric fields—519(A)
Whalen, M. J. (see Jones, Norman)—516(A)
Wheeler, John A. Correspondence principle analysis of double-photon emission—813
White, John U. Gratings as broad band filters for the infra-red—713
—— (see Gore, Robert C.)—23
Whitehead, W. D., Jr. (see Beams, J. W.)—868
Williams, Ferd E. Some new aspects of germanate and fluoride phosphors—302
Williams, Robley C. (see Levinstein, Henry)—520(A)
Williams, Van Zandt (see Gore, Robert C.)—23
—— (see Jones, Norman)—516(A)
Wilson, W. R. (see Frank, J. M.)—718
Wink, Willmer A. (see Van den Akker, J. A.)—363
Wolfe, R. A. (see Enns, J. H.)—519(A)
—— (see Hanau, Richard)—989(A)
—— (see Kessler, K. G.)—133
Wollach, Lorraine (see Sloan, Louis L.)—527(A)
Wood, R. W. Use of echelette gratings in high orders—733
Wright, N. and L. W. Herscher. Analysis with a double-beam infra-red spectrophotometer—516(A)
—— **and L. W. Herscher.** Double-beam, percent transmission recording infra-red spectrophotometer—211
Wright, W. D. Book review—731

Yüng-K'ang Liang (see Hsien-Yu Hsu)—99

Zartman, I. F. (see Hubbard, J. C.)—832

Analytic Subject Index to Volume 37

References with (A) are to abstracts of papers presented at meetings of the Optical Society of America, (L) designates Letters to the Editor.

Absorption, including absorption spectra

Absorption line-width in the rotation spectrum of atmospheric water vapor, Arthur Adel—516(A)

Infra-red absorption of carbonyl groups in steroids, Norman Jones, M. J. Whalen, V. Z. Williams, Konrad Dobriner—516(A)

Infra-red spectrum of carbon disulphide, Earle K. Plyler and Curtis J. Humphreys—517(A)

Light absorption and emission of ions in glasses and crystals as affected by asymmetrical electric fields, W. A. Weyl—519(A)

Limiting colors due to ideal absorption and transmission bands, I. H. Godlove—778

Microwave absorption spectroscopy and some of its techniques, Donald K. Coles—518(A)

Most favorable absorption of the phase plate in phase contrast microscopy, Arthur T. Brice and Paul H. Keck—647

Relation between the absorption spectra and the chemical constitution of dyes. Some effects of non-coplanarity on the absorption spectra of unsymmetrical disazo benzidine dyes, Wallace R. Brode and Robert J. Morris—985(A)

Transmission measurements with the Beckman quartz spectrophotometer, Kasson S. Gibson and Margaret M. Balcom—593

Announcements

Catalog of the Adolph Lomb Optical Library at the University of Virginia—851

Changes in photometric units—402

Index to the literature on spectrochemical analysis—499

Meeting of the Inter-Society Color Council—60, 962

Optical aids for subnormal vision—307

Pfund issue, October 1947

Photographic abstracts—310

Physics abstracts—898

Pittsburgh conference on applied spectroscopy—791

Biological applications

Factors in fluorescence microscopy and some biological applications, D. H. Hamly and Charles Sheard—523(A), 316

Ultraviolet phosphors and fluorescent sun tan lamps, Richard H. Clapp and Robert J. Ginther—355

Use of a monochromatic colorimeter for the study of color blindness, J. A. Van den Akker, J. Edward Todd, Philip Nolan, and Willmer A. Wink—363

Book reviews

Applications of germicidal, erythemal, and infra-red energy, Matthew Luckiesh and John R. Loofbourow—670

Definition and measurement of glass, V. G. W. Harrison and Richard S. Hunter—309

Mathematical analysis of binocular vision, Rudolf K. Luneburg and Paul Boeder—938

Monographs on the progress of research in Holland; achievements in optics, A. Bouwers and M. Herzberger—732

Photoelectric cells, A. Sommer and Wayne B. Nottingham—731

Researches on normal and defective colour vision, W. D. Wright and David L. MacAdam—731

Testing and adjustment of telescope objectives, H. Dennis Taylor and R. Kingslake—58

Color and colorimetry

Changes in hue, lightness, and saturation of surface colors in passing from daylight to incandescent-lamp light, Harry Helson and Josephine Grove—387

Color variations in glasses containing iron, Jack W. Forrest, Norbert J. Kreidl, and Tyler G. Pett—986(A)

Correcting filters for photoelectric photometry and colorimetry, A. J. Werner—528(A)

Goniophotometric characteristics of typical diffuse reflectors, Seibert Q. Duntley and W. R. Jacobson—528(A)

Illuminant in textile color matching, an illuminant to satisfy preferred conditions of daylight-match, Dorothy Nickerson—987(A)

Limiting colors due to ideal absorption and transmission bands, I. H. Godlove—778

Logarithmic photo-multiplier tube photometer, M. H. Sweet—432

Metameric formulation, Robert H. Morris—669(L)

Note on the number of distinct chromaticities, D. L. MacAdam—308(L)

Notes on W. S. Stiles' paper entitled, "A modified Helmholtz line-element in brightness-colour space," Ludwik Silberstein—292

Optimum spectral sensitivities for a reversible color film process, Ronald H. Bingham and Herman Hoerlin—199

Reflex glossmeter, Richard S. Hunter—528(A)

Silberstein on intrinsic properties of the color domain R. H. Sinden—396

Tetrahedral representation of the color solid, Carl E. Foss—529(A)

Use of a monochromatic colorimeter for the study of color blindness, J. A. van den Akker, J. Edward Todd, Philip Nolan, and Willmer A. Wink—363

Densitometry

Logarithmic photo-multiplier tube photometer, M. H. Sweet—432

Neutral density filters of chromel A, Mary Banning—686

Scattered light in microphotometer systems, Rockwell Kent III—519(A)

Dispersion

Infra-red refractive index and dispersion of evaporated stibnite films, Bruce H. Billings and Mark Hyman, Jr. —119; Erratum—395

Three-layered reflection-reducing coatings, Luther B. Lockhart, Jr. and Peter King—689

Electro-optics

Direct-reading spectrometer for ferrous analysis, R. O'B. Carpenter, E. DuBois, and J. Sterner—707

Fluctuations in gas discharges, H. Y. Loh and G. H. Dieke—837

Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials, W. S. Plymale, Jr.—399

Eye

Certain class of binocularly equivalent configurations, Anna Stein—944

Change in refractive power of the human eye in dim and bright light, George Wald and Donald R. Griffin —321

Effect of atmospheric scattering upon the appearance of a dark object against a sky background, G. A. Fry, C. S. Bridgman and V. J. Ellerbrock—635

Measurements of the spherical aberration of the human eye, M. Koomen, R. Scolnik, and R. Tousey—992(A)

Mechanical integrator for studying the distribution of light in the optical image, A. Maréchal—403(L)

New type of reflecting sight, J. Vogl and S. Täcklind— 975

On the influence of accommodation on spherical aberration in the human eye, an attempt to interpret night myopia, A. Ivanoff—730(L)

On the Wright-Nelson explanation of the Stiles-Crawford effect, John R. Platt—669(L)

Photographic granularity and graininess III. Some characteristics of the visual system of importance in the evaluation of graininess and granularity, Loyd A. Jones and George C. Higgins—217

Sensitivity of the human eye to infra-red radiation, Donald R. Griffin, Ruth Hubbard, and George Wald— 546

Stiles and Crawford effect in polarized light, Brian O'Brien—275

Stray light in optical systems, Howard S. Coleman—434

Use of a monochromatic colorimeter for the study of color blindness, J. A. Van den Akker, J. Edward Todd, Philip Nolan, and Willmer A. Wink—363

Visual thresholds of steady point sources of light in fields of brightness from dark to daylight, Selig Hecht—59(L)

Filters

Correcting filters for photoelectric photometry and colorimetry, A. J. Werner—528(A)

Exact solution of the interference filter as a boundary valve problem, P. J. Leurgans—521(A)

Frustrated total reflection interference filters, Paul Leurgans and A. F. Turner—983(A)

Gratings as broad band filters for the infra-red, John U. White—713

Infra-red filters and cells of unpolished salt crystals, J. J. McGovern and R. A. Friedel—660

Interference-type heat reflecting filter, A. F. Turner— 982(A)

Neutral density filters of Chromel A, Mary Banning— 686

Practical methods of making and using multilayer filters, Mary Banning—792

Red and infra-red filters for the study of the Herschel effect, Helmer Bäckström and Johan Basberg—891

Reflection and transmission interference filters. Part I. Theory, L. N. Hadley and D. M. Dennison—451

Spectral transmissions of some eye protective glasses, Edwin L. Hettinger—526(A)

Theoretical development of exact solution of reflectance of multiple layer optical coatings, Doris L. Caballero —176

Tunable narrow band optical filter, Bruce H. Billings— 738

Fluorescence and phosphorescence

Brightness of apparent fluorescence as a function of the exciting intensities, Franz Urbach, Annie Urbach, and Myra Schwartz—122(L)

Emission spectra of some zinc sulfide and zinc-cadmium sulfide phosphors, W. H. Byler—920

Factors in fluorescence microscopy, D. H. Hamly and Charles Sheard—316

Fluorescence of silicate phosphors, Keith H. Butler—566

General correlations between the efficiency characteristics and constitutions of phosphors, H. W. Leverenz— 520(A)

Photoelectric measurement of fluorescence spectra, R. A. Burdett and L. C. Jones, Jr.—554

Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials, W. S. Plymale, Jr.—399

Some new aspects of germanate and fluoride phosphors, Ferd E. Williams—302

Thermal and x-ray analyses of some common phosphors, Rudolph Nagy and Cung Kwai Lui—37

Ultraviolet phosphors and fluorescent sun tan lamps, Richard H. Clapp and Robert J. Ginther—355

Glass, properties of

Chromaticities of loviband glasses, Geraldine Walker Haupt and Florence Lesch Douglas—698

Illumination

Improvements in microscope illumination, James R. Benford—642

Infra-red

Absorption line-width in the rotation spectrum of atmospheric water vapor, Arthur Adel—516(A)

Automatic recording infra-red spectrophotometer, W. S. Baird, H. M. O'Bryan, George Ogden, and Dorothy Lee—754

Estimate of transparency of the atmospheric window 16 mu to 24 mu, Arthur Adel—769

Analysis with a double-beam infra-red spectrophotometer, N. Wright and L. W. Herscher—516(A)

Comparison of LiF and CaF_2 Prisms for infra-red use, Robert C. Gore, Robert S. McDonald, Van Zandt Williams, and John U. White—23
Condensing lenses for Raman tubes of small volume, J. Rud Nielsen—517(A)
Diffuse spectral reflectance of paints in the near infra-red, J. A. Sanderson—771
Double-beam, percent transmission recording infra-red spectrophotometer, N. Wright and L. W. Herscher—211
Gratings as broad band filters for the infra-red, John U. White—713
High transmission windows for radiation of 3 to 14 microns wave-length, Mark Hyman, Jr. and Bruce H. Billings—113
Improved infra-red polarizer, A. H. Pfund—558
Infra-red absorption spectrum of carbon disulphide, Earle K. Plyler and Curtis J. Humphreys—517(A)
Infra-red absorption of carbonyl groups in steroids, Norman Jones, M. J. Whalen, V. Z. Williams, and Konrad Dobriner—516(A)
Infra-red filters and cells of unpolished salt crystals, J. J. McGovern and R. A. Friedel—660
Infra-red prism spectrometer of high resolving power, J. Rud Nielsen, F. W. Crawford, and D. C. Smith—296
Infra-red pupillometer, M. J. Koomen, H. A. Knoll, and R. Tousey—527(A)
Infra-red radiation from a Bunsen burner, Earle K. Plyler—984(A)
Infra-red recording spectrophotometer, H. M. O'Bryan—516(A)
Infra-red refractive index and dispersion of evaporated stibnite films, Bruce H. Billings and Mark Hyman, Jr.—119; Erratum—395
Infra-red spectra of krypton and argon, Curtis J. Humphreys and Earle K. Plyler—516(A)
Infra-red spectrometry from 15 to 25μ, Earle K. Plyler—746
Infra-red spectrophotometer for industrial research, E. J. Martin, A. W. Fischer, B. Mandel, and R. E. Nusbaum—923
Intensity distribution in the Raman bands of six hydrocarbons, J. Rud Nielsen and Charles M. Richards—517(A)
Investigation of the properties of evaporated metal bolometers, B. H. Billings, W. L. Hyde, and E. E. Barr—123
Microwave absorption spectroscopy and some of its techniques, Donald K. Coles—518(A)
Modulated infra-red recording system, Max D. Liston—515(A)
Modulation of the resonance lines in a cesium arc, J. M. Frank, W. S. Huxford, and W. R. Wilson—718
Neutral density filters of Chromel A, Mary Banning—686
Optical silver chloride, H. C. Kremers—337
Practical methods of making and using multilayer filters, Mary Banning—792
Punched card bibliography and data index of infra-red spectroscopy, Harold C. Tingey and Robert R. Hampton—984(A)
Recording and control system for infra-red spectrophotometer, Gerald M. Rassweiler, Max D. Liston, J. F. Lash, and D. L. Fry—963
Red and infra-red filters for the study of the Herschel effect, Helmer Bäckström and Johan Basberg—891
Selective infra-red gas analyzers, W. G. Fastie and A. H. Pfund—762
Sensitivity of the human eye to infra-red radiation, Donald R. Griffin, Ruth Hubbard, and George Wald—546
Use of echelette gratings in high orders, R. W. Wood—733

Intensity measurements

Fluctuations in gas discharges, H. Y. Loh and G. H. Dieke—837
Generalized intensity formula for a system of retardation plates, Hsien-Yü Hsu, M. Richartz, and Yüng-K'ang Liang—99
Instantaneous spectrum line intensity variations, J. H. Enns and R. A. Wolfe—519(A)
Intensity distribution in the Raman bands of six hydrocarbons, J. Rud Nielsen and Charles M. Richards—517(A)
On the intensity of the light reflected from or transmitted through a pile of plates, L. B. Tuckerman—818
Polarization and intensity measurement in Raman spectra by the photoelectric method, D. H. Rank—798

Lenses

Autocollimator for precise measurement of the flange focal distance of photographic lenses, M. G. Townsley and P. C. Foote—42
Compensation of the aperture ratio markings of a photographic lens for absorption, reflection, and vignetting losses, Irvine C. Gardner—524(A)
Condensing lenses for Raman tubes of small volume, J. Rud Nielsen—517(A)
Design of a wide-angle microwave line source (metal lens), John Ruze, Virgil A. Counter, and Elizabeth B. Chisholm—988(A)
Illumination in the focal plane of a camera lens, Edward P. Clancy—906
Lenses of extremely wide angle for airplane mapping, Irvine C. Gardner and Francis E. Washer—984(A)
Light distribution in the optical image, M. Herzberger—485
Metal plate lenses for microwaves, Winston E. Kock—987(A)
On the theory and computation of an aspherical surface, A. E. Glancy; Erratum —663
Photoelectric lens bench, W. Herriott—472
Photographic measurements of atmospheric boil, L. A Riggs, C. G. Mueller, C. H. Graham, and F. A. Mote—415
Rapid non-destructive method of determining the refractive index of lens components, using a spectrometer, S. Jacobsohn, E. Belvian, and H. Hess—941
Recent and unusual German lens designs, Edward K. Kaprelian—466
Recent developments in lenses for aerial photography, R. Kingslake—1

Lenses (continued)

Telescope objective without spherical aberration for large apertures, consisting of four crown glass lenses, Gordon S. Fulcher—47

Theory of condensing lenses for Raman tubes of small volume, J. Rud Nielsen—494

Letters to the Editor

Brightness of apparent fluorescence as a function of the exciting intensities, Franz Urbach, Annie Urbach, and Myra Schwartz—122

Cathodoluminescence emission spectra of zinc-oxide phosphors, R. E. Shrader and H. W. Leverenz—939

Criterion for resolution, Paul C. Cross and Eugene R. Nixon—309

Mechanical integrator for studying the distribution of light in the optical image, A. Maréchal—403

Metameric formulation, Robert H. Morris—669

Note on the number of distinct chromaticities, D. L. MacAdam—308

Note on the stability of phosphors under ultraviolet irradiation, Herman C. Froelich—308

Notes on the stability of phosphors under ultraviolet irradiation, George Meister and Rudolph Nagy—403

On the influence of accommodation on spherical aberration in the human eye, an attempt to interpret night myopia, A. Ivanoff—730

On the Wright-Nelson explanation of the Stiles-Crawford effect, John R. Platt—669

Preparation by an evaporation technique of correcting elements for refracting optical systems, L. G. Schulz—509

Stray radiation in littrow-type spectrometers which employ collimating mirrors, Harold W. Straat—507

Tables for the determination of the refractive index and of the thickness of the thin film by the polarimetric method, Antonin Vašiček—979(L)

Visual thresholds of steady point sources of light in fields of brightness from dark to daylight, Selig Hecht—59

Light sources, properties and measurements

Diffuse spectral reflectance of paints in the near infrared, J. A. Sanderson—771

Light distribution in the optical image, M. Herzberger—485

Light scattering by spherical particles, David Sinclair—475

Logarithmic photo-multiplier tube photo-meter, M. H. Sweet—432

Mechanical integrator for studying the distribution of light in the optical image, A. Maréchal—403(L)

Method for measuring the spectral energy distribution of low brightness light sources, Frank J. Studer—288

Multiplier photo-tube characteristics: application to low light levels, Ralph W. Engstrom—420

Nature of the light emitter in photo-flash lamps, Frank G. Brockman—652

On the intensity of the light reflected from or transmitted through a pile of plates, L. B. Tuckerman—818

Polanret microscope, Harold Osterberg—726

Reflection of light from glass with double and multiple films, Antonin Vašiček—623

Spark light source of short duration, J. W. Beams, A. R. Kuhlthau, A. C. Lapsley, J. H. McQueen, L. B. Snoddy, and W. D. Whitehead, Jr.—868

Spectral and modulation characteristics of the concentrated-arc, W. S. Huxford and J. R. Platt—10

Spectral variations of the intermittency effect for some panchromatic plates, W. Hopwood and J. D. Craggs—560

Stray light in optical systems, Howard S. Coleman—434

Study concerning characteristics of the high voltage a.c. arc, F. A. Boettner and C. F. Tufts—192

Theory of condensing lenses for Raman tubes of small volume, J. Rud Nielsen—494

Meetings

Minutes of the twenty-ninth meeting of the Board of Directors of the Optical Society of America—510

Proceedings of the thirty-second annual meeting of the Optical Society of America—981

Proceedings of the winter meeting of the Optical Society of America—515

Microscopy

Achromatic ultraviolet microscope objective, L. V. Foster and E. M. Thiel—992(A)

Contrast effects of phase changing elements in microscopy, Joseph Magliozzi—982(A)

Factors in fluorescence microscopy, D. H. Hamly and Charles Sheard—316

Improvements in microscope illumination, James R. Benford—642

Most favorable absorption of the phase plate in phase contrast microscopy, Arthur T. Brice and Paul H. Keck—647

Polanret microscope, Harold Osterberg—726

Structure of evaporated films as determined by electron diffraction and electron microscopy, Henry Levinstein and Robley C. Williams—520(A)

Theory of measuring unresolvable particles with the phase microscope, Harold Osterberg—523(A)

Microwave optics

Design of a wide-angle microwave line source (metal lens), John Ruze, Virgil A. Counter, Elizabeth B. Chisholm—988(A)

Metal plate lenses for microwaves, Winston E. Kock—987(A)

Microwave optics between parallel conducting sheets, H. B. De Vore and H. A. Iams—987(A)

On metal plate prisms for microwaves. I, Wade Ellis, Norris O. Hansen, George E. Reynolds, and Edward J. Murphey—988(A)

Reflectors for wide-angle scanning at microwave frequencies, Roy C. Spencer, Wade Ellis, Ellen C. Fine, and Maynard D. Pearson—988(A)

Optical instruments

Absorption-emission pyrometer: a new type of instrument for the measurement of high flame temperatures, Donald H. Jacobs and Seymour Scholnick—992(A)

Optical instruments (continued)

Apparatus for determining spherical aberration of convex surface of paraboloid of revolution, Benjamin Goldberg and Nels C. Benson—186
Apparatus for measuring factors connected with appearance, Richard S. Hunter—986(A)
Autocollimator for precise measurement of the flange focal distance of photographic lenses, M. G. Townsley and P. C. Foote—42
Automatic recording infra-red spectrophotometer, W. S. Baird, H. M. O'Bryan, George Ogden, and Dorothy Lee—754
Comparison of LiF and CaF_2 prisms for infra-red use, Robert C. Gore, Robert S. McDonald, Van Zandt Williams, and John U. White—23
Compensation of flexure in range finders and sighting instruments, G. W. Moffitt—582
Differential method for introducing non-spherical surfaces into calculation of optical systems, D. S. Volosov—342
Diffuse spectral reflectance of paints in the near infra-red, J. A. Sanderson—771
Double-beam, percent transmission recording infra-red spectrophotometer, N. Wright and L. W. Herscher—211
Gratings as broad band filters for the infra-red, John U. White—713
High transmission windows for radiation of 3 to 14 microns wave-length, Mark Hyman, Jr. and Bruce H. Billings—113
Improvements in microscope illumination, James R. Benford—642
Instrument for evaluation of abrasion-resistance of thin films, D. M. Packer—983(A)
Instrument for the measurement of the index of refraction of liquids in the wave-length range 200 mμ to 1000 mμ, James L. Lauer and P. H. Miller, Jr.—664
Interferometer studies of telescopic systems, Howard S. Coleman, David G. Clark, and Madeline F. Coleman—671
Investigation of the properties of evaporated metal bolometers, B. H. Billings, W. L. Hyde, and E. E. Barr—123
Logarithmic photo-multiplier tube photometer, M. H. Sweet—432
Making Fresnel off-axis parabolic mirrors by the evaporation technique, L. G. Schulz—349
Mechanical integrator for studying the distribution of light in the optical image, A. Maréchal—403(L)
Method for making precise resolution measurements, Howard S. Coleman and Samuel W. Harding—263
Method for microspectrography of metals, Ford R. Bryan and George A. Nahstoll—311
Modulation of the resonance lines in a cesium arc, J. M. Frank, W. S. Huxford, and W. R. Wilson—718
Movable unitized Beckman spectrophotometer installation, T. U. Marron and J. H. Muth—522(A)
Multiplier photo-tube characteristics: application to low light levels, Ralph W. Engstrom—420
New one-step photographic process, Edwin H. Land—61
On the theory and computation of an aspherical surface, A. E. Glancy: Erratum—663
Polanret microscope, Harold Osterberg—726
Recent developments in lenses for aerial photography, R. Kingslake—1
Reflex glossmeter, Richard S. Hunter—528(A)
Selective infra-red gas analyzer, W. G. Fastie and A. H. Pfund—762
Sky brightness measurements from rocket-borne equipment, H. A. Miley and D. F. McClellan—994(A)
Telescope objective without spherical aberration for large apertures, consisting of four crown glass lenses, Gordon S. Fulcher—47
Total emissivity of various materials at 100–500°C, B. T. Barnes, W. E. Forsythe, and E. Q. Adams—804
Transmission measurements with the Beckman quartz spectrophotometer, Kasson S. Gibson and Margaret M. Balcom—593
Use of a monochromatic colorimeter for the study of color blindness, J. A. Van den Akker, J. Edward Todd, Philip Nolan, and Willmer A. Wink—363
Use of echelette gratings in high orders, R. W. Wood—733

Optical materials

Optical silver chloride, H. C. Kremers—337

Optical Society of America reports

Annual report of the Editor of Publications—510
Annual report of the Secretary of the Optical Society of America for the calendar year 1946—511
Annual report of the Treasurer of the Optical Society of America for the fiscal year 1946—513

Optical testing

Autocollimator for precise measurement of the flange focal distance of photographic lenses, M. G. Townsley and P. C. Foote—42
Brightness and polarization of the daylight sky at various altitudes above sea level, R. Tousey and E. O. Hulburt—78
Compensation of flexure in range finders and sighting instruments, G. W. Moffitt—582
Effect of alkali and alkaline earth salts on the spectrographic determination of strontium, E. Fast and J. Rud Nielsen—614
Effect of atmospheric scattering upon the appearance of a dark object against a sky background, G. A. Fry, C. S. Bridgman, and V. J. Ellerbrock—635
Generalized intensity formula for a system of retardation plates, Hsien-Yü Hsü, M. Richartz, and Yüng-K'ang Liang—99
Interferometer studies of telescopic systems, Howard S. Coleman, David G. Clark, and Madeline F. Coleman—671
Investigation of the figure of small concave metal-replica mirrors, John N. Shive—849
Partially reflecting mirrors of high efficiency and durability, Mary Banning—688
Preparation by an evaporation technique of correcting elements for refracting optical systems, L. G. Schulz—509(L)

Optical testing (continued)

Reduction in image contrast caused by the aberrations in telescopic systems, Howard S. Coleman—684

Reflection of light from glass with double and multiple films, Antonin Vašiček—623

Spectral variations of the intermittency effect for some panchromatic plates, W. Hopwood and J. D. Craggs—560

Spectrographic analysis of ferrosilicon, J. H. Coulliette—609

Stray light in optical systems, Howard S. Coleman—434

Theoretical resolution angles for point and line test objects in the presence of a luminous background, Howard S. Coleman and Madeline F. Coleman—572

Thermal and x-ray analyses of some common phosphors, Rudolph Nagy and Chung Kwai Lui—37

Transmission measurements with the Beckman quartz spectrophotometer, Kasson S. Gibson and Margaret M. Balcom—593

Optics, general

Apparatus for measuring factors connected with appearance, Richard S. Hunter—986(A)

Aspheric corrector plate for a refracting optical system, Robert E. Hopkins and Walter Siegmund—991(A)

Centering of optical systems, A. L. Ingalls and K. Pestrecov—991(A)

Color variations in glasses containing iron, Jack W. Forrest, Norbert J. Kreidl, and Tyler G. Pett—986(A)

Compensation of the aperture ratio markings of a photographic lens for absorption, reflection, and vignetting losses, Irvine C. Gardner—524(A)

Computation of paraxial coefficients of an optical system, Stephen W. Stark—990(A)

Concentric Maksutov-Schmidt reflecting systems, Harold F. Bennett—520(A)

Contrast effects of phase changing elements in microscopy, Joseph Magliozzi—982(A)

Contributions of the single surfaces to the image errors, M. Herzberger—990(A)

Correspondence principle analysis of double-photon emission, John A. Wheeler—813

Criterion for resolution, Paul C. Cross and Eugene R. Nixon—309(L)

Crystal orientation and refractive index of thick evaporated MgF_2 films, Howard S. Coleman, A. F. Turner, and O. A. Ullrich—521(A)

Electroformed precision prisms, Benjamin Goldberg—992(A)

Electron bombardment cleaning, Collin H. Alexander—521(A)

Exact solution of the interference filter as a boundary valve problem, P. J. Leurgans—521(A)

Factors in fluorescence microscopy and some biological applications, D. H. Hamly and Charles Sheard—523(A)

Fluorescence and absorption spectral data for pigment synthesized by the human tubercle bacillus and isolated by chromatographic analysis, M. O'L. Crowe and A. Walker—986(A)

Fluorescence of silicate phosphors, Keith H. Butler—566

Focal plane diffraction anomalies in telescopic systems, A. I. Mahan—852

Frustrated total reflection interference filters, Paul Leurgans and A. F. Turner—983(A)

General correlations between the efficiency characteristics and constitutions of phosphors, H. W. Leverenz—520(A)

Historical note on the rate of a moving atomic clock, Herbert E. Ives—810

Improvements in microscope illumination, James Benford—642

Instrument for evaluation of abrasion-resistance of thin films, D. M. Packer—983(A)

Interference-type heat reflecting filter, A. F. Turner—982(A)

Light absorption and emission of ions in glasses and crystals as affected by asymmetrical electric fields, W. A. Weyl—519(A)

Measurement of meteorological range, Seibert Q. Duntley—994(A)

Method of computing correction plate for Schmidt system for near projection, with special reference to system for television projection, Harry S. Friedman—520(A)

New approach to the problem of granularity in photographic materials, John V. Atanasoff and C. E. Barthel, Jr.—524(A)

New type of reflecting sight, J. Vogl and S. Täcklind—975

Non-adaptability of the I.C.I. system to some near-whites which show absorption in the far blue region of the spectrum, A. E. Jacobsen—987(A)

Note on the stability of phosphors under ultraviolet irradiation, Herman C. Froelich—308(L)

Notes on the stability of phosphors under ultraviolet irradiation. George Meister and Rudolph Nagy—403(L)

On the intensity of the light reflected from or transmitted through a pile of plates, L. B. Tuckerman—818

Optical scattering by dielectric powders of uniform particle size, J. R. DeVore and A. H. Pfund—826

Optical study of acoustic fields near diffracting edges, J. C. Hubbard, I. F. Zartman, and C. R. Larkin—832

Pharmacological reactions of irradiated and non-irradiated blood sera, David I. Macht and Marcus Ostro—986(A)

Power losses from heated objects in still air, B. T. Barnes, W. E. Forsythe, and E. Q. Adams—808

Preparation and application of reproducible gloss standards, Daniel Smith and Marie M. Mahoney—986(A)

Reduction of astigmatism in the NRL rocket spectrograph, F. S. Johnson and R. Tousey—991(A)

Relation between the absorption spectra and the chemical constitution of dyes. Some effects of non-coplanarity on the absorption spectra of unsymmetrical disazo benzidine dyes, Wallace R. Brode and Robert J. Morris—985(A)

Search for the correspondence of Sir Isaac Newton—978

Some new optical diffraction pictures, Franklin S. Harris, Jr.—982(A)

Some new techniques in prism refractometry, P. T. Scharf—992(A)
Stray light caused by the presence of a luminous body within the field of an optical system, Howard S. Coleman—899
Structure of evaporated films as determined by electron diffraction and electron microscopy, Henry Levinstein and Robley C. Williams—520(A)
Study of diffraction patterns in presence of various aberrations, A. Maréchal—982(A)
Submarine binocular telescope MK 90 and MK 91, Willard T. Perkins—524(A)
Theory of measuring unresolvable particles with the phase microscope, Harold Osterberg—523(A)
Upper atmosphere of the earth, E. O. Hulburt—405
Variable light polarizing coating, John F. Dreyer—983(A)

Optics, geometrical

Certain class of binocularly equivalent configurations, Anna Stein—944
Making Fresnel off-axis parabolic mirrors by the evaporation technique, L. G. Schulz—349
On the theory and computation of an aspherical surface, A. E. Glancy: Erratum—663
Three-layered reflection-reducing coatings, Luther B. Lockhart, Jr. and Peter King—689

Optics, physical

Coating thickness measurement by interferometry, M. F. Bechtold—873
Correspondence principle analysis of double-photon emission, John A. Wheeler—813
Decoloration of natural fluorite crystals, Robert Herman and Shirleigh Silverman—871
New calculus for the treating of optical systems. V. A more general formulation and description of another calculus, R. Clark Jones—107
New calculus for the treatment of optical systems. VI. Experimental determination of the matrix, R. Clark Jones—110
Power losses from heated objects in still air, B. T. Barnes, W. E. Forsythe, and E. Q. Adams—808
Production and calibration of Foucault test objects of various contrasts, Howard S. Coleman and David G. Clark—272
Size, shape, and contrast in detection of targets by daylight vision. I. Data and analytical description, Edward S. Lamar, Selig Hecht, Simon Shlaer, and Charles D. Hendley—531
Spectrochemical determination of the major constituents of minerals and rocks, Aslak Kvalheim—585
Theoretical development of exact solution of reflectance of multiple layer optical coatings, Doris L. Caballero—176
Total emissivity of various materials at 100–500°C, B. T. Barnes, W. E. Forsythe, and E. Q. Adams—804

Photoelectricity

Photoelectric lens bench, W. Herriott—472

Photography, including cameras

Application of an image dissection principle to high speed motion photography, Brian O'Brien and Gordon G. Milne—993(A)
Autocollimator for precise measurement of the flange focal distance of photographic lenses, M. G. Townsley and P. C. Foote—42
Cinema spectrograph for photographing rapid spectral sequences, Robert Herman and Shirleigh Silverman—988(A)
Concentric Maksutov-Schmidt reflecting systems, Harold F. Bennett—520(A)
Illumination in the focal plane of a camera lens, Edward P. Clancy—906
Lenses of extremely wide angle for air plane mapping, Irvine C. Gardner and Francis E. Washer—984(A)
Light distribution in the optical image, M. Herzberger—485
Method of computing correction plate for Schmidt system for near projection, with special reference to systems for television projection, H. S. Friedman—480
Methods of evaluating resolution of aerial cameras, Duncan E. MacDonald—984(A)
Nature of the light emitter in photo-flash lamps, Frank G. Brockman—652
New approach to the problem of granularity in photographic materials, John V. Atanasoff and C. E. Barthel, Jr.—524(A)
New one-step photographic process, Edwin H. Land—61
Photographic granularity and graininess. III. Some characteristics of the visual system of importance in the evaluation of graininess and granularity, Loyd A. Jones and George C. Higgins—217
Photographic measurements of atmospheric boil, L. A. Riggs, C. A. Mueller, C. H. Graham, and F. A. Mote—415
Production and calibration of Foucault test objects of various contrasts, Howard S. Coleman and David G. Clark—272
Projection screens for home television receivers, R. R. Law and I. G. Maloff—993(A)
Recent developments in lenses for aerial photography, R. Kingslake—1
Spark light source of short duration, J. W. Beams, A. R. Kuhlthau, A. C. Lapsley, J. H. McQueen, L. B. Snoddy, and W. D. Whitehead, Jr.—868
Spectral variations of the intermittency effect for some panchromatic plates, W. Hopwood and J. D. Craggs—560
Stabilized aerial camera mountings, Roy C. Gunter, Jr.—984(A)
Talbot's bands, F. B. Pidduck—55

Photometry

Calibration of a photo-multiplier photometer, J. R. DeVore—994(A)
Correcting filters for photoelectric photometry and colorimetry, A. J. Werner—528(A)
Direct-reading spectrometer for ferrous analysis, R. O'B. Carpenter, E. DuBois, and J. Sterner—707

Photometry (continued)

Hololumen system for rating photo-responsive devices, George A. Van Lear—525(A)

Measurement of the intensity ratios of spectral lines with electron multiplier photo-tubes, K. G. Kessler and R. A. Wolfe—133

Multiplier photo-tube characteristics: Application to low light levels, Ralph W. Engstrom—420

Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials, W. S. Plymale, Jr.—399

Some observations in photographic photometry on emulsion calibration curves, Milton Green—993(A)

Transmission measurements with the Beckman quartz spectrophotometer, Kasson S. Gibson and Margaret M. Balcom—593

Polarization

Brightness and polarization of the daylight sky at various altitudes above sea level, R. Tousey and E. O. Hulburt—78

Improved infra-red polarizer, A. H. Pfund—558

Instrument for the measurement of the index of refraction of liquids in the wave-length range 200 mu to 1000 mu, James L. Lauer and P. H. Miller, Jr.—664

Neutral density filters of Chromel A, Mary Banning—686

Note on the stability of phosphors under ultraviolet irradiation, Herman C. Froelich—308(L)

Notes on the stability of phosphors under ultraviolet irradiation, George Meister and Rudolph Nagy—403(L)

On the Wright-Nelson explanation of the Stiles-Crawford effect, John R. Platt—669(L)

Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass, Antonin Vašiček—145

Polarization and intensity measurements in Raman spectra by the photoelectric method, D. H. Rank—798

Polarization of Brillouin spectra, D. H. Rank, J. S. McCartney, and C. J. Szasz—985(A)

Practical methods of making and using multilayer filters, Mary Banning—792

Reflectivity and transmissivity of multiple thin coatings, W. Weinstein—576

Stiles and Crawford effect in polarized light, Brian O'Brien—275

Tables for the determination of the refractive index and of the thickness of the thin film by the polarimetric method, Antonin Vašiček—979(L)

Theory of the anti-coronae, H. C. van de Hulst—16

Tunable narrow-band optical filter, Bruce H. Billings—738

Variable light polarizing coating, John F. Dreyer—983(A)

Pyrometry

Absorption-emission pyrometer: A new type of instrument for the measurement of high flame temperatures, Donald H. Jacobs and Seymour Scholnick—992(A)

Radiation

Estimate of transparency of the atmospheric window 16 mu to 24 mu, Arthur Adel—769

High transmission windows for radiation of 3 to 14 microns wave-length, Mark Hyman, Jr. and Bruce H. Billings—113

Instrument for the measurement of the index of refraction of liquids in the wave-length range 200 mu to 1000 mu, James L. Lauer and P. H. Miller, Jr.—664

Investigation of the properties of evaporated metal bolometers, B. H. Billings, W. L. Hyde, and E. E. Barr—123

Modulation of the resonance lines in a cesium arc, J. M. Frank, W. S. Huxford, and W. R. Wilson—718

Sensitivity of the human eye to infra-red radiation, Donald R. Griffin, Ruth Hubbard, and George Wald—546

Stray radiation in Littrow-type spectrometers which employ collimating mirrors, Harold W. Straat—507(L)

Table of logarithmic corrections to the Wien radiation law, Elliot Q. Adams—695

Ultimate sensitivity of radiation detectors, R. Clark Jones—879

Refraction

Aspheric corrector plate for a refracting optical system, Robert E. Hopkins and Walter Siegmund—991(A)

Change in refractive power of the human eye in dim and bright light, George Wald and Donald R. Griffin—321

Crystal orientation and refractive index of thick evaporated MgF_2 films, Howard S. Coleman, A. F. Turner, and O. A. Ullrich—521(A)

Index of refraction of silver chloride in the heat region, W. Lewis Hyde—984(A)

Infra-red refractive index and dispersion of evaporated stibnite films, Bruce H. Billings and Mark Hyman, Jr., Erratum—395

Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass, Antonin Vašiček—145

Preparation by an evaporation technique of correcting elements for refracting optical systems, L. G. Schulz—509(L)

Rapid non-destructive method of determining the refractive index of lens components, using a spectrometer, S. Jacobsohn, E. Beloian, and H. Hess—941

Refractive indices of alcohol, water, and their mixtures at high pressures, Joseph S. Rosen—932

Some new techniques in prism refractometry, P. T. Scharf—992(A)

Tables for the determination of the refractive index and of the thickness of the thin film by the polarimetric method, Antonin Vašiček—979(L)

Three-layered reflection-reducing coatings, Luther B. Lockhart, Jr. and Peter King—689

Spectrographic analysis

Direct reading spectrometer for ferrous analysis, R. O'B. Carpenter, E. DuBois, and J. Sterner—707

Effect of alkali and alkaline earth salts on the spectrographic determination of strontium, E. Fast and J. Rud Nielsen—614

Hollow cathode source applicable to spectrographic analysis of the halogens and gases, J. Rand McNally, Jr., George R. Harrison, and Eugene Rowe—93
Industrial application of Geiger-Müller counters to the analysis of phosphorus in steel, George A. Nahstoll—990(A)
Infra-red spectra of krypton and argon, Curtis J. Humphreys and Earle K. Plyler—516(A)
Intensity distribution in the Raman bands of six hydrocarbons, J. Rud Nielsen and Charles M. Richards—517(A)
Investigation of the use of Geiger-Müller photo-electron counters in the spectrographic analysis of phosphorus in steel, Richard Hanau and R. A. Wolfe—989(A)
Measurement of the intensity ratios of spectral lines with electron multiplier photo-tubes, K. G. Kessler and R. A. Wolfe—133
Method for micro-spectrography of metals, Ford R. Bryan and George A. Nahstoll—311
New applications of the quantometer to direct-reading spectrochemistry, M. F. Hasler, J. W. Kemp, and C. E. Harvey—990(A)
Point-to-point arcing technique for the spectrochemical analysis of Monel, C. J. Newhaus and Paul E. Lighty—519(A)
Quantitative spectrochemical determination of barium, strontium, and calcium, W. Hartmann and B. E. Prescott—989(A)
Second spectrum of ytterbium, William F. Meggers—988(A)
Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials, W. S. Plymale, Jr.—399
Spectral variations of the intermittency effect for some panchromatic plates, W. Hopwood and J. D. Craggs—560
Spectrochemical analysis of ceramics and other nonmetallic materials, Edwin K. Jaycox—162
Spectrochemical analysis of high copper in cast iron and steel, W. R. Kennedy—154
Spectrochemical analysis of nickel alloys, Edwin K. Jaycox—159
Spectrochemical analysis by the copper spark method, Mark Fred, Norman H. Nachtrieb, and Frank S. Tomkins—279
Spectrochemical determination of the major constituents of minerals and rocks, Aslak Kvalheim—585
Spectrographic analysis of ferro-silicon, J. H. Coulliette—609
Study concerning characteristics of the high-voltage a.c. arc, E. A. Boettner and C. F. Tufts—192
Teaching routine spectrographic analysis in industry, William R. Kennedy—989(A)
Theory of condensing lenses for Raman tubes of small volume, J. Rud Nielsen—494
Use of completely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analyses, Lester W. Strock and George E. Heggen—29

Spectroscopy; spectrometry; spectrophotometry

Analysis with a double-beam infra-red spectrophotometer, N. Wright and L. W. Herscher—516(A)
Automatic recording infra-red spectrophotometer, W. S. Baird, H. M. O'Bryan, George Ogden, and Dorothy Lee—754
Cinema spectrograph for photographing rapid spectral sequences, Robert Herman and Shirleigh Silverman—988(A)
Comparison of LiF and CaF_2 for infra-red use, Robert C. Gore, Robert S. McDonald, Van Zandt Williams, and John U. White—23
Condensing lenses for Raman tubes of small volume, J. Rud Nielsen—517(A)
Decoloration of natural fluorite crystals, Robert Herman and Shirleigh Silverman—871
Diffuse spectral reflectance of paints in the near infra-red, J. A. Sanderson—771
Direct-reading spectrometer for ferrous analysis, R. O'B. Carpenter, E. DuBois, and J. Sterner—707
Double-beam, percent transmission recording infra-red spectrophotometer, N. Wright and L. W. Herscher—211
Emission spectra of some zinc sulfide and zinc-cadmium sulfide phosphors, W. H. Byler—920
Infra-red spectrophotometer for industrial research, E. J. Martin, A. W. Fischer, B. Mandel, and R. E. Nusbaum—923
High precision source unit for spectrochemistry, M. F. Hasler, J. W. Kemp, and W. H. Miller—990(A)
Hollow cathode source applicable to spectrographic analysis of the halogens and gases, J. Rand McNally, Jr., George R. Harrison, and Eugene Rowe—93
Index of refraction of silver chloride in the heat region, W. Lewis Hyde—984(A)
Infra-red prism spectrometer of high resolving power, J. Rud Nielsen, F. W. Crawford, and D. C. Smith—296
Infra-red radiation from a Bunsen burner, Earle K. Plyler—984(A)
Infra-red recording spectrophotometer, H. M. O'Bryan—516
Infra-red spectrometry from 15 to 25μ, Earle K. Plyler—746
Instantaneous spectrum line intensity variations, J. H. Enns and R. A. Wolfe—519(A)
Instrument for the measurement of the index of refraction of liquids in the wave-length range 200 mu to 1000 mu, James L. Lauer and P. H. Miller, Jr.—664
Measurement of depolarization factors in Raman spectra, A. E. Douglas and D. H. Rank—985(A)
Metameric formulation, Robert H. Morris—669(L)
Method for automatically recording spectral energy distribution from continuous spectrum sources, Frank J. Studer—522(A)
Method for measuring the spectral energy distribution of low brightness light sources, Frank J. Studer—288
Microwave absorption spectroscopy and some of its techniques, Donald K. Coles—518(A)
Modulated infra-red recording system, Max D. Liston—515(A)
Movable unitized Beckman spectrophotometer installation, T. U. Marron and J. H. Muth—522(A)
Multiplier photo-tube characteristics: application to low light levels, Ralph W. Engstrom—420

Spectroscopy; spectrometry; spectrophotometry (continued)
Optical finishing of KRS materials, Frank Cooke—984(A)
Optical scattering by dielectric powders of uniform particle size, J. R. DeVore and A. H. Pfund—826
Photoelectric measurement of fluorescence spectra, R. A. Burdett and L. C. Jones, Jr.—554
Polarization of Brillouin spectra, D. H. Rank, J. S. McCartney, and C. J. Szasz—985(A)
Punched card bibliography and data index of infra-red spectroscopy, Harold C. Tingey and Robert R. Hampton—984(A)
Radiometry and spectroscopy at Operation Crossroads, S. S. Ballard, E. O. Hulburt, J. A. Sanderson, and H. S. Stewart—522(A)
Rapid non-destructive method of determining the refractive index of lens components, using a spectrometer, S. Jacobsohn, E. Beloian, and H. Hess—941
Recording and control system for infra-red spectrophotometer, Gerald M. Rassweiler, Max D. Liston, J. F. Lash, and D. L. Fry—963
Scattered light in microphotometer systems, Rockwell Kent III—519(A)
Second spectrum of ytterbium, William F. Meggers—988(A)
Selective infra-red gas analyzer, W. G. Fastie and A. H. Pfund—762
Self-reversal of spectral lines in Al-Mg alloys, F. E. Roach and T. J. Rollins—989(A)
Solar spectrograph for V-2 rocket, R. Tousey, C. V. Strain, J. J. Oberly, F. S. Johnson, and W. A. Baum—523(A)
Spectral characteristics of Hg arc. Radiation with regard to production of Brillouin spectra and "second-order Raman spectra," J. S. McCartney and D. H. Rank—985(A)
Spectrograph of high resolution for the region 0.6 to 3.0 microns, R. C. Nelson—985(A)
Stray radiation in Littrow-type spectrometers which employ collimating mirrors, Harold W. Straat—507(L)
Talbot's bands, F. B. Pidduck—55
Transmission measurements with the Beckman quartz spectrophotometer, Kasson S. Gibson and Margaret M. Balcom—593
Use of echelette gratings in high orders, R. W. Wood—733
Zeeman effect and g-values for neutral nitrogen and oxygen, C. C. Kiess and George Shortley—989(A)

Transmission
Infra-red refractive index and dispersion of evaporated films, Bruce H. Billings and Mark Hyman, Jr.—119; Erratum—395
Limiting colors due to ideal absorption and transmission bands, I. H. Godlove—778
Optical scattering by dielectric powders of uniform particle size, J. R. DeVore and A. H. Pfund—826
Reflectivity and transmissivity of multiple thin coatings, W. Weinstein—576
Reflection and transmission interference filters. Part I. Theory, L. N. Hadley and D. M. Dennison—451
Transmission measurements with the Beckman quartz spectrophotometer, Kasson S. Gibson and Margaret M. Balcom—593

Vision, visibility; visual phenomena
Brightness and polarization of the daylight sky at various altitudes above sea level, R. Tousey and E. O. Hulburt—78
Case of unilateral deuteranopia, Louise L. Sloan and Lorraine Wollach—527(A)
Certain class of binocularly equivalent configurations, Anna Stein, 944
Effect of atmospheric scattering upon the appearance of a dark object against a sky background, G. A. Fry, C. S. Bridgman, and V. J. Ellerbrock—635
Effect of a constant current on vision, S. V. Kravkov and L. P. Galochkina—181
Hololumen system for rating photo-responsive devices, George A. Van Lear—525(A)
Infra-red pupillometer, H. A. Knoll and R. Tousey—527(A)
Infra-red response from incandescent lamps, Bernard F. Greene—525(A)
Optimum spectral sensitivities for a reversible color film process, Ronald H. Bingham and Herman Hoerlin—199
Photographic granularity and graininess III. Some characteristics of the visual system of importance in the evaluation of graininess and granularity, Loyd A. Jones and George C. Higgins—217
Relation of the configuration of a brightness contrast border to its visibility, Glenn A. Fry—166
Sensitivity of the human eye to infra-red radiation, Donald R. Griffin, Ruth Hubbard, and George Wald—546
Size, shape, and contrast in detection of targets by daylight vision. I. Data and analytical description, Edward S. Lamar, Selig Hecht, Simon Shlaer, and Charles D. Hendley—531
Spectral transmissions of some eye protective glasses, Edwin L. Hettinger—526(A)
Telescope objective without spherical aberration for large apertures, consisting of four crown glass lenses, Gordon S. Fulcher—47
Two-quanta explanation of the dependence of the threshold values and visual acuity on the visual angle and the time of observation, M. A. Bauman and H. A. van der Velden—908
Visibility of lines and squares at high brightness, Selig Hecht, Sherman Ross, and Conrad G. Mueller—500
Visual thresholds of steady point sources of light in fields of brightness from dark to daylight, Selig Hecht—59(L)
Use of a monochromatic colorimeter for the study of color blindness, J. A. Van den Akker, J. Edward Todd, Philip Nolan, and Willmer A. Wink—363

Ultraviolet
Ultraviolet phosphors and fluorescent sun tan lamps, Richard H. Clapp and Robert J. Ginther—355

Zeeman Effect
Zeeman effect and g-values for neutral nitrogen and oxygen, C. C. Kiess and George Shortley—989(A)